From:	Clemetson, Michael
To:	Mitchell, Tanya
Subject:	RE: Pore water sampling
Date:	Thursday, November 06, 2014 10:41:00 AM

I think Bill Sy has been looking at it.

From: Mitchell, Tanya
Sent: Thursday, November 06, 2014 10:41 AM
To: Clemetson, Michael
Subject: RE: Pore water sampling

Mike,
Thanks for the quick review, Do you have someone in mind in HWSS?

From: Clemetson, Michael
Sent: Thursday, November 06, 2014 9:02 AM
To: Mitchell, Tanya
Cc: Jackson, Amelia; Pensak, Mindy
Subject: RE: Pore water sampling

Tanya
This method seems ok to me. It may be appropriate to forward the incoming detailed plan to HWSS for their review.
Thanks
Mike

From: Mitchell, Tanya
Sent: Wednesday, November 05, 2014 2:56 PM
To: Clemetson, Michael; Paul Hagerman; Amy Darpinian; Mishkin, Katherine
Subject: FW: Pore water sampling

Hello All,
I just received the attached information from ARCADIS. The approach appears to be reasonable. Please take a look and let me know if you have any concerns. Since I'm out of the office on Friday, can you let me know tomorrow if possible?
Thanks,
Tanya

From: Walls (Young), Suzy [mailto:Suzy.Walls@arcadis-us.com]
Sent: Wednesday, November 05, 2014 2:15 PM
To: Mitchell, Tanya
Cc: Persico, John; Gutherz, Andrew
Subject: Pore water sampling

Tanya,
I left you a voicemail earlier today but wanted to follow-up with an email. We have continued evaluating pore water sampling methods that would be appropriate for full TCL/TAL parameters. Our revised proposal was to collect VOCs and metals using passive diffusion bags. We have not been able to identify any other passive sampling methods for SVOCs, PCBs, or pesticides that are approved and will provide the quantity of pore water necessary to conduct these analyses. However, we have found a one-time sampling method that we can use to collect the remaining analytes.
I have attached a USEPA Region 4 SOP for pore water sampling using a PushPoint sampler. This method involves pushing a stainless steel tube with a well screen into the sediment and extracting

pore water that we then send to the lab. We would only use this method to collect SVOCs, PCBs, and pesticides – we would not use it for VOCs and metals. There are a few reasons why we would not want to use the PushPoint for VOCs and metals. Specific to metals, the PushPoint method may pull some sediment into the screen and would likely result in inorganic concentrations that are more closely associated with the sediment rather than the pore water. The diffusion bag, on the other hand, provides a cleaner sample for metals because it doesn't allow sediment particles through the membrane. Similarly, the PushPoint method may also allow some release of volatiles which, again, can be avoided using the passive diffusion bags. This method still has some limitations for the quantity of extract water and so we would like to keep our required volumes to a minimum. If we try to extract too much water from the sampler, we run the risk of short circuiting the screen and pulling in surface water, which we are trying to avoid.

If this plan is amenable to USEPA, we can provide a letter with the detailed sampling method. Please feel free to call me with questions and we can discuss further.

Thank you,

Suzy

Suzy Walls | Project Scientist / Ecologist | suzy.walls@arcadis-us.com
ARCADIS U.S., Inc. | 114 Lovell Road, Suite 202 | Knoxville, TN, 37934
T. 865.777.3502 | M. 919.455.5413 | F. 865.675.6712
www.arcadis-us.com